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ABSTRACT

This lesson plan for the second and third grades uses information on dinosaurs, their adaptations and survival, to provide science education for limited-English-proficient (LEP) students in San Diego, California. The primary text is "Los Dinosaurios Gigantes," a core literature book used in the school district. Lessons are based on the whole language philosophy and cooperative grouping strategies, exploring language arts/science, mathematics, social studies, and English language development. Hands-on activities and opportunities are highly recommended. The lesson unit is for one week, 25-30 minutes per day. Language levels include pre- and early production, speech emergence, and intermediate fluency. Instructional components are second language development, primary language instruction, specially designed academic instruction in the second language, cross-cultural/self-esteem building, and parent/community involvement. Instructional objectives, unit goals, homework, and assessment are described. Appendixes contain English and Spanish handouts. (Contains 7 references.) (NAV)

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ED 389 201

Theme: Fossils and Dinosaurs

GRADE: SECOND
CONTENT AREAS: LANGUAGE ARTS/SCIENCE, MATHEMATICS, SOCIAL STUDIES, MUSIC, ART, P.E., DRAMA
TIME LENGTH: ONE WEEK 25-35 MINUTE LESSONS
LANGUAGE LEVELS: PRE-PRODUCTION, EARLY PRODUCTION, SPEECH EMERGENCE, INTERMEDIATE FLUENCY
INSTRUCTIONAL COMPONENTS: ENGLISH LANGUAGE DEVELOPMENT, PRIMARY LANGUAGE INSTRUCTION, SPECIALLY DESIGNED ACADEMICS INSTRUCTION IN ENGLISH, CROSS-CULTURAL, SELF ESTEEM, PARENT AND COMMUNITY INVOLVEMENT.

1. THEME AND RATIONALE

The overarching theme for our unit is dinosaurs, emphasizing adaptations and survival. The rationale for selecting this content is to adapt and enrich the existing units about dinosaurs as outlined by the curriculum guides for second and third grade in the majority of California school districts. This particular unit was designed to utilize the Silver Burdett text and the Los Dinosaurios Gigantes core literature book utilized by the San Diego Unified School District and the MacMillan text utilized by the Capistrano Valley School District. English Language Development lessons are provided for each proficiency level. The Primary Language lessons are the same in English and Spanish. Students will receive the same lessons so that when they receive Specially Designed Academics in English all students are familiar with the concepts and vocabulary in their primary language. All lessons are constructed so that they can easily be taught in a primary language or a SDAIE format, as they are based on the whole language philosophy and cooperative grouping strategy. Such lessons in this unit are marked with a "#". It is recommended that social studies lessons be taught in the primary language to facilitate the development of CALP in the primary language.

Instruction for all children should be done with as many hands-on

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activities and opportunities for children to work together with peers. All of the lessons in this unit follow this ideology.

The Cross-Cultural/Self Esteem component of this unit is marked with an asterisk and is also presented at the end of the unit.

2. UNIT GOALS WITH INSTRUCTIONAL OBJECTIVES

A. Students will be able to explain how plants and animals can be preserved as fossils and how fossils help scientists know about life in the past.

1. Students will sequence pictures and sentence strips to represent the order in the formation of fossils.
2. Students will observe a teacher-made fossil population and record: the number of shells, average size, infer how the animal might have moved, infer where the animal lived.

B. Students will compare and contrast plant-eating dinosaurs with meat-eating dinosaurs.

1. Students will make a Venn Diagram comparing two types of dinosaurs.
2. Students will be able to name and list characteristics of plant-eating dinosaurs and meat-eating dinosaurs.

C. Students will be able to identify reasons for the extinction of dinosaurs.

1. Students will be able to name and illustrate at least two scientific theories to explain the extinction of dinosaurs.
2. Students will write their own theories explaining what happened to the dinosaurs based on what they have learned in this unit.

3. DESCRIPTION OF ASSESSMENT

Students will create a dinosaur folder to include projects and information about fossils and dinosaurs. Students will also keep a daily attitude sheet that they fill out at the end of each day, assessing their own cooperation as a member of a cooperative group and their overall effort. At the end of the week, students will select three samples of their best work to be put in their monthly portfolio.

4. HOMEWORK ASSIGNMENTS

On Day 1, students will be assigned homework for the entire week. The assignments will be completed by the end of the week. During Day 5, students will share their work. Students will take home a self-selected book on the theme of Dinosaurs. The teacher will provide a variety of books available for check out in the students' primary language. Students are to take the books home and read them with their families. Together, the students and the families will write about what they learned from reading and discussing the book. The second assignment will be to interview a family member who has lived in or visited another country whose climate is different. Students will

write their responses using Day 4 vocabulary as a guide. The third activity will be to look through the newspaper together with a family member for any articles about prehistoric times. They will then discuss their findings and share with the class. (There may or may not be any information available.)

5. PARENT/COMMUNITY INVOLVEMENT

Parent and community involvement is encouraged and sought throughout the school year. A successful education is a result of a partnership between the school and the home. Parents who have any knowledge or expertise that is pertinent to this unit should be encouraged to visit the classroom. Local nurseries could also be requested to come in and provide information about the plant life that would likely have existed during the time of the dinosaurs. A field trip to a local nursery or museum would also be appropriate.

The Self-Esteen Adjectives and Actions chart will be displayed on the wall throughout the year in both the classroom and the home. The teacher and the students will be encouraged to refer to the chart when making written or oral comments about students or peers.

DAY 1

LANGUAGE ARTS/SCIENCE
Motivation: Show photographs of various reptiles. Have students talk about characteristics and adaptations that they notice. Develop with the class an Inquiry Chart listing the characteristics and the things they know about reptiles and the the things they would like to find out about them. Generate a list of words that describe reptiles. Students use the list to generate informational sentences about reptiles. Introduce the poem, "La Viborita." * Read to class the story, Baby Rattlesnake. Students construct snake puppet from Project AIMS, "Critters" unit.

MATH
Students will repeat and chant the place value chart to familiarize themselves with large numbers and how to say them. They will also develop an understanding of how long ago the dinosaurs existed.

100 million/ 10 million/ millions/ 100 thousands/ 10 thousands/ thousands/ hundreds/tens/ones.

#After students feel comfortable with the place value chart, they will work in pairs, making up numbers and practicing saying them.

When the teacher determines students have practiced sufficiently, he/she will refer to the book, Patrick's Dinosaurs, and ask them to tell how many years ago the dinosaurs lived. Children will then look at charts of dinosaurs from the Jurassic Period (208-144 million years ago) and then discuss the numbers.

SOCIAL STUDIES
Reptile Habitats: Have students imagine that they are going to move to a new place where the climate is different from where they live now. Ask them what they would need to be comfortable in the new climate. Show photographs of different environments such as, the desert, the swamp, the jungle and the forest. Discuss with the students how the environments differ from one another. Using Silver Burdett text book, Science, read and discuss with children pages 42-52 which includes a description of each habitat. # Divide class into cooperative groups. Assign each group a different habitat. Students reread section pertaining to assigned habitat and develop a mural depicting that habitat. Each group will show its mural and report on the characteristics of that habitat.

ENGLISH LANGUAGE DEVELOPMENT
All levels will view short video tape about reptiles.

Pre-production: Look at photographs of reptiles. Point to the snake, lizard, alligator, crocodile. Students will point to various body parts and adaptations as the teacher names them. Using TPR, students act out motions, crawl, slither, climb, run, swim.

Early Production: Students construct with the guidance of teacher a diagram of a snake or lizard. Students name the body parts as the teacher points to them. Teacher labels the parts on the diagram as the students dictate them. Review diagram with the class and read the labels together.

Speech Emergence: Students brainstorm a list of words that describe reptiles or things that they saw in the video. Students dictate to teacher 2-3 sentences while teacher writes them on class chart of chalkboard. Students choral read the dictated sentences, then copy and illustrate them.

Intermediate Fluency:
#Students will work in cooperative groups. They will select one reptile and discuss its adaptations and brainstorm words that describe them. Using the brainstorming list, students will construct a set of sentences about this reptile.

FINE ARTS
Students draw snake with colored chalk onto dark-colored construction paper. Students invent own camoflage patterns and skin designs.

VOCABULARY DAY 1

habitats
desert
swamp
jungle
forest

reptiles
snake
lizard
komodo dragon
rattlesnake
boa constrictor
chameleon
alligator
turtle
tortoise
crocodile
python

verbs/actions
hide
bask
climb
crawl
swim
touch
run
smell
coil
defend
warn
shed
eat

math
hundreds
thousands
millions
ten thousands
hundred thousands
ten millions
hundred millions

adjectives
cold-blooded
moist
dry
forked
live
warm
hot
humid

adaptations
scales
skin
tongue
fangs
claws
tail
teeth
bones
backbone
blood
shell
venom
rattle
skeleton
muscles
eggs
camoflage
cold-blooded

DAY 2

LANGUAGE ARTS/SCIENCE
Students will learn about fossils.
Motivation: Ask students, "How do we know that the dinosaurs existed?" Show photograph of paleontologists extracting fossilized bones from site. Ask: "Who are these people?" "What do you suppose they are doing?"

Lesson: Read to class the book , Digging Up Dinosaurs, by Aliki and discuss text with the class. Using text, review the steps used in fossil formation and excavation and have students dictate the steps as you write them on sentence strips. Have students put the steps into proper sequence.

Extension: Divide the class into two rotating skills groups. One group will work with the teacher reading and discussing text of book, Ciencias, pgs. 1-5. The other group will work with the paraprofessional reading and constructing the booklet, "Historia de un Fósil."

SOCIAL STUDIES
Continue with Day 1 lesson about environments and locations on world map. Review with students the seven continents, having students name the continents and locate them on the world map. Review maps of world at the back of the book, Los Dinosaurios Gigantes, and have students identify the continents where the most dinosaur fossils have been found; where the least fossils have been found; and where the different types of dinosaurs have been found.

MATH
Teacher will familiarize students with the types of measurements needed to make the plaster of paris fossils they will be making during the art lesson. # In cooperative groups, students will find the appropriate measurement tools as the teacher names them. For example: "Show me 1/2 teaspoon; Show me 1 cup. By the end of the lesson, students will have demonstrated ability to measure the ingredients needed to make the fossils.

ART
Students will make models of fossils using plaster of paris, water, sea shells and paper cups. Students will follow a recipe, measuring plaster of paris, water. They will mix the plaster of paris and pour it into paper cups. They will place sea shells that have been coated with petroleum
jelly onto the surface of the plaster of paris mixture and allow the mixture to dry and harden overnight.

ENGLISH LANGUAGE DEVELOPMENT

Preproduction: Show children the book, Digging Up Dinosaurs. Have students point to some of the pictures of vocabulary from Day 2 list.

Have students work together to complete a worksheet about fossils. They will need to cut and paste specific pictures of vocabulary terms to complete a picture.

Early Production: Have vocabulary words from the list. Paleontology presented as manipulatives or pictures.

Picture read the book, Digging Up Dinosaurs and have students point and identify specific vocabulary terms.

Have students classify and name manipulatives according to pictures on a specific page in the book.

Speech Emergence: Read the book, Digging Up Dinosaurs aloud and refer to Day 2 talking chart.

Have students draw a scene from the book and label their pictures in cooperative groups. Have students share their pictures with the class.

Intermediate: #Have students partner-read the book, Digging Up Dinosaurs.
Fluency: Discuss Day 2 talking chart and add on any new words that the children themselves generate.

In cooperative groups, children will make their own books about fossils. Each group will be responsible for two pages. When children finish the book, have each group report about what the did and what they have learned about fossils.

VOCABULARY DAY 2

paleontology/ geology

mud
lava
sediment
rocks
coal
amber
fossils
shells
resin
ocean bottom
heavy rocks

activity
die
bury
diet
dig
protect
discover
find

plant life
ferns
forests
plants
palms

body parts
skeleton
bones
teeth
molars
fangs
bony plates
claws
spikes

DAY 3

LANGUAGE ARTS/SCIENCE

Show dinosaur bulletin board display. # Students work in teams of two or three and talk to each other about what they already know about dinosaurs. Teams will then report to the class what they know as the teacher writes the information on a class dinosaur Inquiry Chart. Students discuss as a whole group what they would like to find out about dinosaurs as the teacher adds this information to the Inquiry Chart.

Introduce the informational book, Los Dinosaurios Gigantes. Have students "picture read" the book, discussing the pictures and determining what they think they will be learning about dinosaurs. Direct students' attention to the title page, noting the title, author and illustrator. Have students make predictions about what the book will be about. Teacher will write students' predictions on a chart.

Guided reading of the book with discussions questions posed by the teacher.

Dinosaur Comparisons Activity:
Have students open their books to page 6. Teacher models how to describe the Tracodon using comparisons of its characteristics. For example, "It's as big as a house. It has a bill like a duck. It stands on two feet like a kangaroo. Have students work with partners to see how many dinosaurs they can describe in this manner. Choose a dinosaur for whole class to describe and have students offer descriptions while teacher writes them down.

MATH
Students will be shown a Talking Chart of dinosaur names and will chant them with one student being the teacher.

This will lead into a lesson on how big the dinosaurs really were. The teacher will discuss how paleontologists know how big the dinosaurs were and lead students to the idea of measurement. Children will brainstorm what type of measurement they are familiar with. # From the student-generated lists, students will work in cooperative groups and determine what type of measurement will be needed for specific dinosaur body parts. For example: Feet or meters will be used for tails, necks, bodies, etc; Inches and centimeters will be used for teeth, plates, claws, spikes, etc.; Miles or kilometers will be used to tell how far a dinosaur traveled on a certain day or how far he was chased by a predator.

SOCIAL STUDIES
Have students brainstorm the type of habitat they think the dinosaurs lived in. Introduce the concept of a swamp habitat. Introduce vocabulary and characteristics of swamps including: humidity, hot, muddy, watery, wet, plant life. # Have students do a jigsaw-type cooperative group activity. Divide class into cooperative groups. Assign each group a different aspect of swamp environment including, plant life, climate, animal life, landforms. Each group

will read the section of social studies book that describes a swamp and illustrate a section of a mural that depicts the group's assigned aspect. Groups will come together and report on their respective aspects.

ENGLISH LANGUAGE DEVELOPMENT

Pre-production: Using a dinosaur chart or bulletin board display, have students point to the dinosaur that is tall or the dinosaur that is short.
Point to the spines of the stegosaurus and say the numbers as students point to each spine with you. Show me the dinosaur that looks the meanest. Show me the dinosaur you like the best.

Early-production: Students answer questions or prompts with one-two word responses. Is stegosaurus sleeping or drinking water? Does stegosaurus have spines? Does triceratops have spines or horns? Is Tyrannosaurus smaller or larger than Diplodocus? Are there four or five dinosaurs in this scene?

Speech Emergence: Prompt short answers. What is stegosaurus doing? How would you describe Tyrannosaurus Rex? Have students dictate a list of characteristics of a given dinosaur.

Intermediate Fluency: Prompt detailed answers: What color do you think the dinosaurs might have been? Why? How do you think the dinosaurs disappeared? Do you think stegosaurus would have been friendlier or meaner than a tiger? Why? Have students draw a picture of what they would do if they had a pet stegosaurus. # Divide class into groups of four and have them share their pictures and discuss them.

VOCABULARY
DAY 3

adjectives
tall
heavy
strong
long
short
strong
duck-billed
big
long-necked
mean
sharp
pointed
flat
small
gigantic
intelligent
fast
ferocious
slow
heavy

dinosaur names
dinosaur
tracodon
tyrannosaurus rex
diplodocus
brachiosaurus
triceratops
stegosaurus
allosaurus
elasmosaurus
pteranodon
ankylosaurus

body parts
back
teeth
claws
spikes
bony plates
tail
feet
head
bill

verbs
protect
defend
tear
fight
attack
run
eat
fly
hunt
bite
swim

landforms
swamp
humid
hot
muddy
water
wet

DAY 4

LANGUAGE ARTS/SCIENCE

Have students name the adaptations of a meat-eating animal of today such as a lion. Have them discuss why the lion would need these adaptations in order to survive. Follow the same procedure for a plant-eating animal. List adaptations of both animals on chart paper as the students dictate them.

#Divide the class into two parts. Have students partner-read the section of the Ciencias book that pertains to carnivorous and herbivorous dinosaurs, pgs 7-12, each half of the class reading about one type. Each half of the class will report on what they learned about carnivores and herbivores while teacher fills in the information on a Venn Diagram. Students will then read the Venn Diagram noting differences and similarities.

#Students will work in pairs to write a description of a dinosaur. Using the book, Los Dinosaurios Gigantes, students will take turns writing sentences describing their chosen dinosaurs.

ART

Activity will accompany dinosaur description language arts activity. Students will illustrate their dinosaurs and turn their drawings into diagrams by labeling the body parts described in their descriptions.

MATH

This activity will be presented on both Day 4 and Day 5.

Cooperative groups from Day 3 will report their findings to the class. A discussion of how one would go about making a dinosaur life-sized would follow. Students would do a Quickwrite of how math would be involved in making a life-sized dinosaur and share their ideas with the students in their groups. Together with the teacher's guidance, students would come up with a plan to construct a life-sized dinosaur.

Sixth graders would be trained to assist the younger children in making their dinosaurs as a school community project. Students will work in groups of five with two sixth graders helpers to construct a life-sized dinosaur on the school playground. Students would pick their dinosaurs and follow the measurements given to help them. Length, height, and all other important measurements would be given.

SOCIAL STUDIES

This lesson will be a continuation of Day 3's lesson describing the swamp environment. Students will discuss the aspects of swamps that would support dinosaur life including, warm air, abundance of water, lush plant life, etc.

ENGLISH LANGUAGE DEVELOPMENT

Pre-production- Students will be given food items such as lettuce or bread which they will eat as teacher explains concepts of chewing and tearing. Students will be shown pictures of food items and be asked to point to the item which is made from plants or hold up the item that is meat. Pictures of various dinosaurs will be shown and students will be asked to touch the parts such as the teeth, claws, etc. Students will physically demonstrate ripping, tearing, grinding by use of hands.

Early Production- Introduce adaptations vocabulary. Present students with a featureless model or picture of a dinosaur onto which adaptations can be drawn. Students will dictate to teacher the parts that are missing. Teacher will draw in the parts and label them as the students dictate them. Students will choral read the parts when the model is complete.

Speech Emergence- # Students will work in cooperative groups each group being assigned a different dinosaur. Groups will generate a list of words that will describe how the dinosaur would eat and what types of food it would eat.

Intermediate Fluency- #Divide class into two teams. Assign each team either Tyrannosaurus Rex or Apatosaurus. Teams will meet and discuss the reasons why they think their assigned dinosaur should be King of the Dinosaurs. Class will then meet together as a whole group and each team will present their arguments.

VOCABULARY DAY 4

Vocabulary terms from Day 4 will be carried over and reinforced in Day 5.

dinosaur classification
carnivore
herbivore
omnivore

diet
plants
meat

adaptations
nails
molars
fangs
teeth
claws
spikes
plates
horns
armor

adjectives
strong
sharp
flat

verbs
grind
rip
chew
tear
defend
protect
hunt
graze
stalk
hide
ambush
eat
bite
chop

DAY 5

LANGUAGE ARTS/SCIENCE
Class will invent a BIG BOOK of dinosaur riddles. Students will select their favorite dinosaur from the book, Los Dinosaurios Gigantes. Students place the name of this dinosaur in the center of a piece of paper and write facts and descriptive words around the name. Students will use these words and ideas to write at least three sentences giving clues to help identify their particular dinosaurs. Students will also write out the answer to their riddles and illustrate them on a second sheet of paper. Students will read their riddles to a partner or to the class. Classmates will guess the dinosaur and tell which clue was the most helpful to them. When work is complete, it will be compiled into one classroom BIG BOOK.

MATH
Math activity for Day 5 will be a continuation of the math activity for Day 4.

SOCIAL STUDIES
Introduce and discuss three theories that try to explain why the dinosaurs became extinct. Introduce term theory.
a) Volcanic eruptions with enough ash in air to block the sun's effectiveness to nurture the earth causing plants to die. The food chain was crippled enough to cause extinction.
b) A large meteorite smashed into the Earth causing thick clouds of dust to rise and stay in the air, blocking the sun and causing the plants to die. The food chain was crippled enough to cause plants to die and therefore the dinosaurs.
c) A climatic change created a drought causing the swamps to dry up. The loss of the swamps and water was significant enough to cause the plant life to die and therefore the dinosaurs.

All three theories will be discussed and differences and similarities in the theories will be charted through use of a Venn Diagram. Students will discuss which theory makes the most sense to them and why. Class will work together to make a bar graph indicating the most popular and the least popular theories of the class.

ENGLISH LANGUAGE DEVELOPMENT

Pre-production: Students will review vocabulary words and match picture cards of food items to the dinosaurs that would have eaten them. To help emphasize animal adaptations vocabulary, students will match picture cards of targeted vocabulary to the dinosaurs' body parts. Students will do the actual labeling while pronouncing the words under the guidance of the teacher.

Early Production: Students will name the various dinosaur adaptations and their purposes, review with the teacher the characteristics of classes of dinosaurs and categorize these dinosaurs into two groups: herbivores and carnivores.

Speech Emergence: Using vocabulary word sets for animal adaptations and foods, students will play a BINGO game. Students will be shown picture cards by the teacher and will call out the words and mark their cards appropriately.

Intermediate Fluency: # Students will work in cooperative groups to create short written reports using the new vocabulary. Students will orally share their reports with classmates.

VOCABULARY DAY 5

Vocabulary from Day 4 will be reinforced. A new vocabulary set has been added to help with the understanding of the social studies concepts presented in Day 5.

dinosaur classifications
carnivore
herbivore
omnivore

diet
plants
meat

adaptations
nails
molars
fangs
teeth
claws

adjectives
strong
sharp
flat

natural phenomena
theory
drought
climate change
eruption
meteorite
ash
dust
habitat

verbs
grind
rip
chew
tear
defend
protect
hunt
graze
stalk
hide
ambush
eat
bite
chop

MULTICULTURAL ACTIVITIES

Multicultural activities and cross-cultural activities are important for the self esteem of the children in the classroom and helpful in increasing student awareness and appreciation of other cultural groups. Multicultural ideas can be implemented at the teacher's discretion.

A few multicultural activities are suggested below:

a) Students will listen to the story, Baby Rattlesnake which is a translation of the Navajo folktale told by Te Ata. After hearing the story, students will discuss the cultural aspects of storytelling and whether or not their relatives also tell them stories. Students will look up with the help of the teacher the location of the Navajo reservations. Teacher will point out that much of this location is a desert environment. Students will name the animals mentioned in the story and discuss why these animals would be important to the Navajo people. Students will discuss the theme of the story, that of responsible use of resources and discuss its importance to them.

b) Children will plan meals for a chosen dinosaur for one complete day. Students should be encouraged to choose foods that represent other cultures and that complement the natural diet of the dinosaur.

c) Students will compare how the dinosaurs were adapted to their environment with how people of various geographic locations adapt themselves to their environments with emphasis placed on how these people dress. Students can draw native costumes of these peoples on a chosen dinosaur depending on where these dinosaurs have been found.

d) Show students a photograph of the Komodo Dragon. Students will discuss whether or not other dragons really exist or whether they are fantasy. Discuss features of the Komodo Dragon and have students give opinions as to whether or not they think it is scary. Have students name other stories they may have heard that involve dragons. Discuss why people from many cultures may have stories about dragons. This subject could be an opening activity for a related unit about dragons, implementing dragon stories from various cultures.

P.E./ MUSIC/ AND DRAMA

P.E.

Students will play a version of British Bulldog. Students will divide up into two lines one line will pick what type of dinosaur they will be, a plant-eating dinosaur or a meat-eating dinosaur. The other line with either be a plant, an animal found in pre-historic time or shelter. Students can hold different colors of yarn to represent what they have chosen to be. To play the dinosaurs must pick what they need to survive, plants, animals, or shelter, once they have decided they run to the other side and find a child who represents what they need. As the game goes on children that were caught by the dinosaurs become dinosaurs and children can visually see what happens when there is not enough food for all.

P.E.

Have students play a dinosaur version of Cats and Mice. Discuss prey and predator.

MUSIC/DRAMA

See attatched Dinosaur songs to familiar tunes. Children once familiar with the words can sing and act out songs.

MUSIC/ DRAMA

*Play different types of music (classical, jazz, latina) and have students move like dinosaurs would to the music.

ART

Discuss what Mosaics are, ask children where they have seen them. Together make a mosaic of a scene in pre-historic time.

SELF ESTEEM COMPONENT: ADJECTIVES AND ACTIONS TO BE PERFORMED BY STUDENTS

1. Admired: well-liked by peers, consistently sets good example with regard to work completion and classroom conduct, demonstrates leadership qualities, not easily influenced by others.

2. Cooperative: participates readily in cooperative learning groups, consistently follows directions, does his/her fair share of work involved in completing a task.

3. Creative: demonstrates ability to solve problems using higher level thinking and original strategies, demonstrates ability to view information from a variety of perspectives, tries a variety of media to complete tasks.

4. Open-Minded: listens to others without forming judgements, attempts new or unfamiliar activities without hesitation, shares ideas and thoughts and accepts opinions of others.

5. Patient: Allows others time to process information and answer questions without interrupting, sees a task through to completion-is not easily frustrated, calmly thinks through difficult situations.

6. Responsible: Has turned in all assigned work on time, accepts evaluation of cooperative group's efforts, takes care of school property and all classroom materials.

7. Self-Controlled: Attentive to cooperative group's tasks, not easily distracted by outside activities, waits for opportunities to participate without interrupting.

8. Self-Directed: Begins work promptly, consistently completes assignments in an organized manner, will participate in classroom activities without encouragement by teacher.

9. Supportive: Shares responsibility in cooperative groups, helps classmates who may be having difficulty, encourages classmates to follow class rules and directions.

10. Thoughtful: Provides answers that demonstrate insightful thinking, takes time to formulate answers to questions without blurting out, tries to appreciate differences of opinion.

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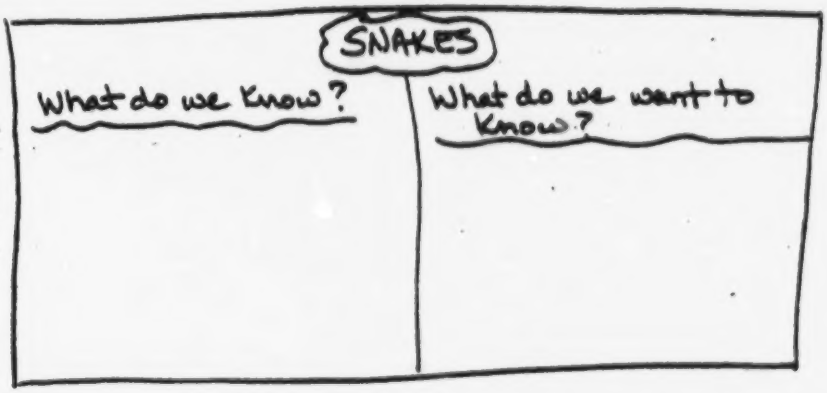
APPENDIX

Inquiry Charts

- "anticipatory set" of unit
- 15 minute "warm up" for unit
- diagnostic tool
- language modeling
- scientific "hypothesis" method
- use blank butcher paper; brainstorm; color-code

(ie.)



- used again and again at various times during unit for "metacognition" of what's being learned
- used at end of unit for closure – "What have we learned ...?"
- "Walk the walls" every day; not just a print rich environment, but print functional = interactive

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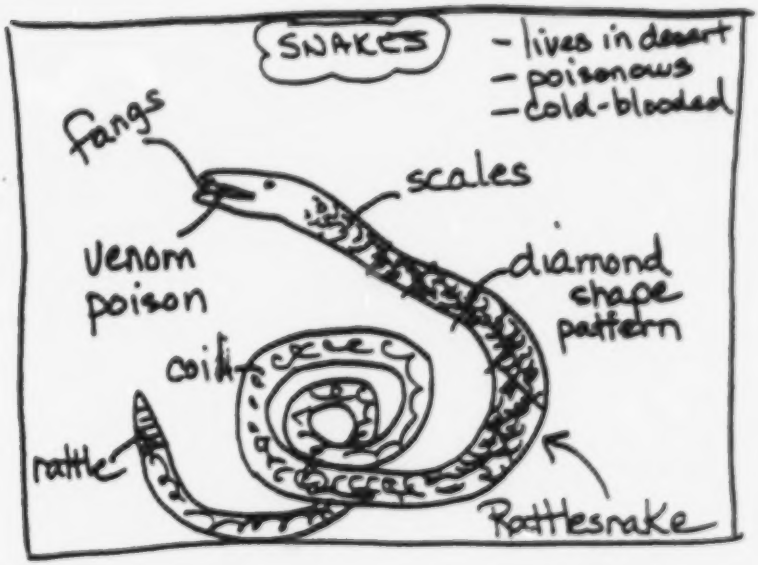
Pictorial/Narrative Input Charts ✓

- information "chunking"
- lightly penciled sketches on butcher paper
- draw picture(s) and label salient points
- whole class watching/listening/interacting
- use high level vocabulary – "whatever you put <u>in</u> will come <u>out</u> in student's oral and written work"
- teach to the highest; review to the lowest
- can also do in "narrative" format, with a read-aloud to go along with the chart development
- meant to be manipulated by kids – added to re-told, discussed, etc.

(i.e.)



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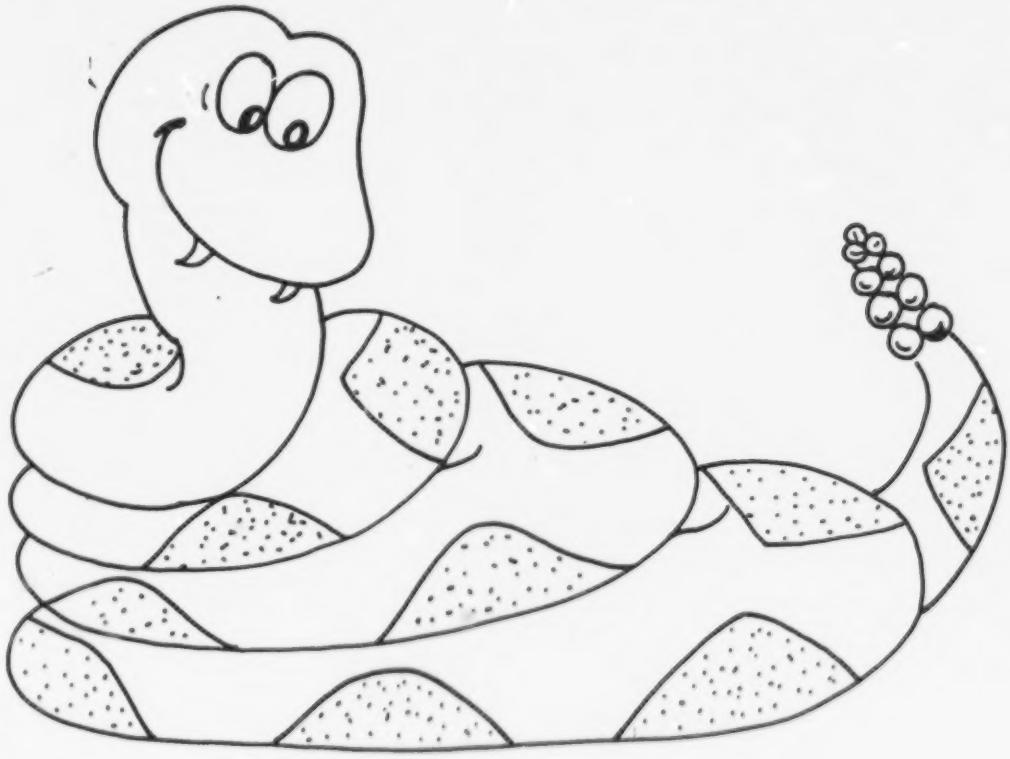
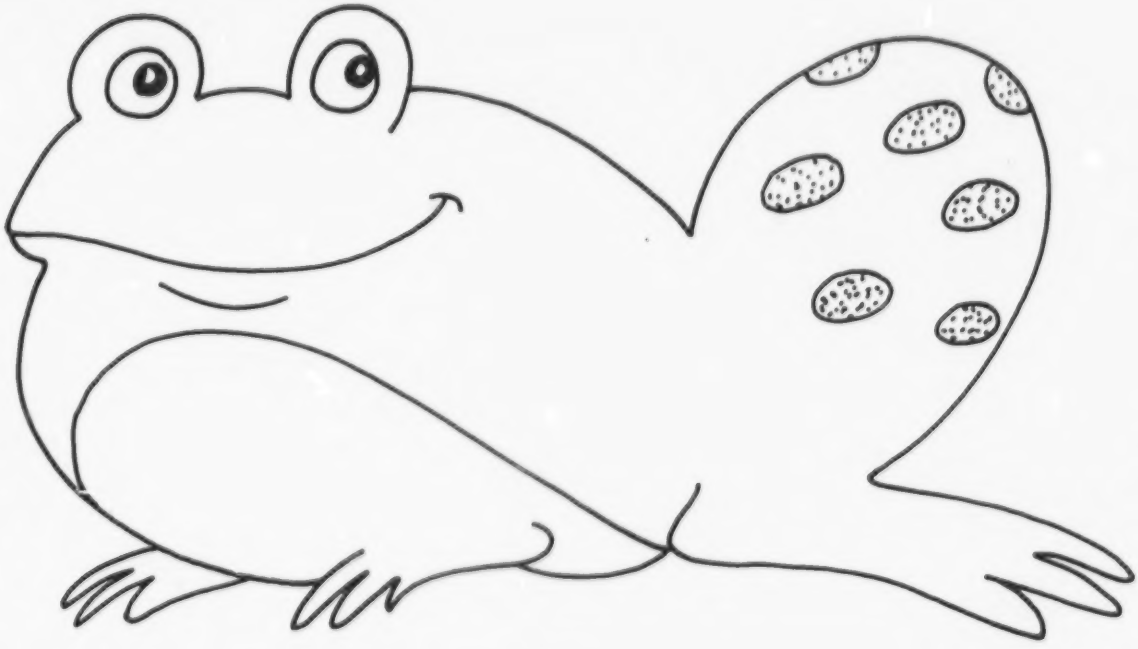
UNDER COVER





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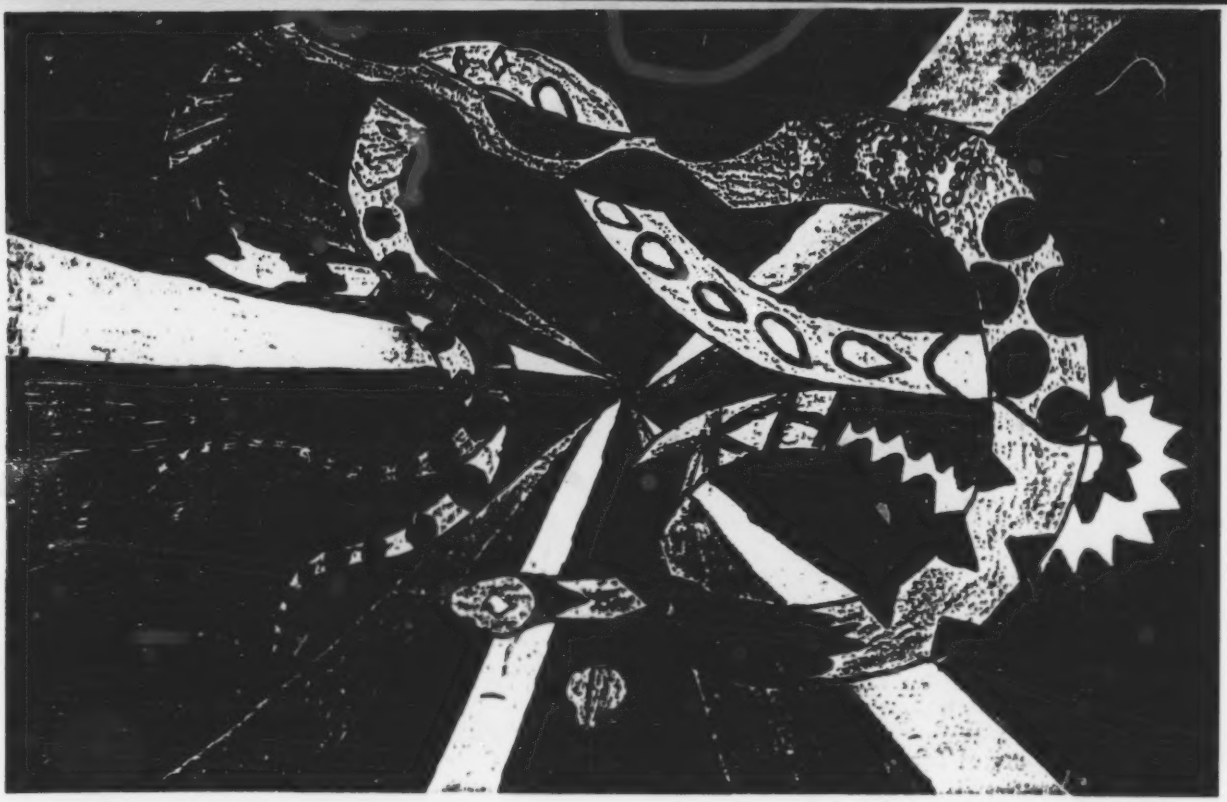
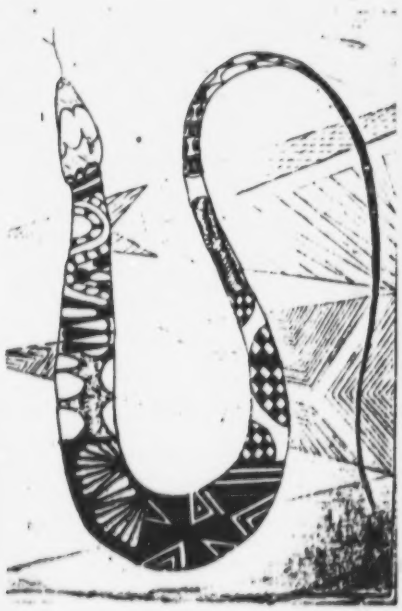


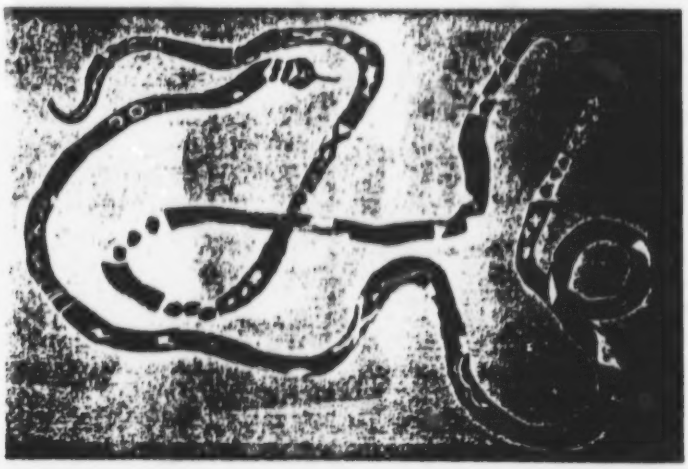
Snake in the class

JUST the word snake provokes instant reaction from most youngsters. All too often, the reaction is negative. Actually, snakes are both fascinating and attractive! Use books from the library to increase children's knowledge about these intriguing reptiles. If a zoo is close by, make a trip for the specific purpose of viewing snakes and their designs.

Fill large sheets of paper with rhythmic and colorful snakes. Cut around some and paste to colorful backgrounds. Not even butterflies make better design subjects!

Celeste Bouchillon teaches art at B. B. Comer School, Sylacauga, Alabama.





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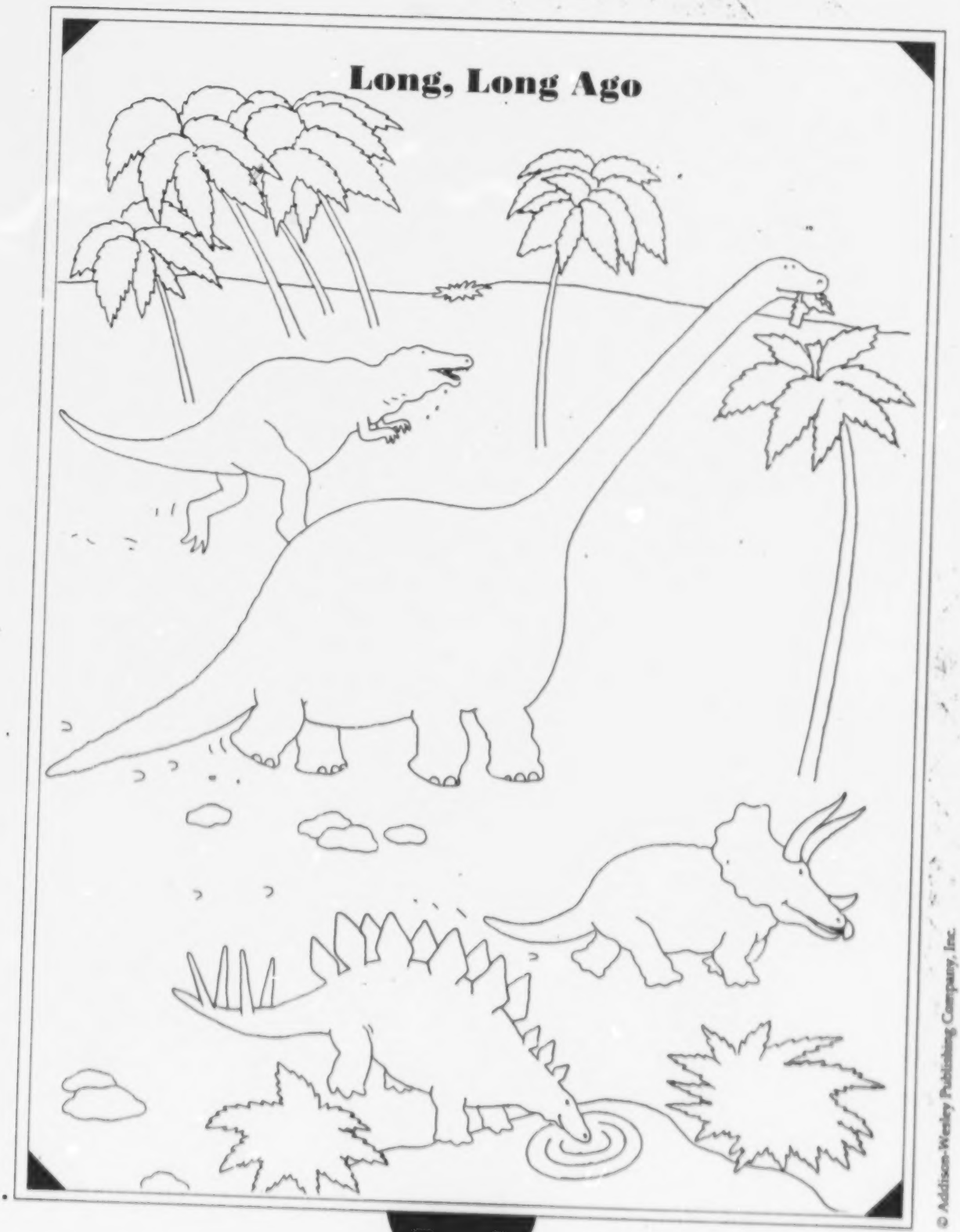

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Historia de un Fósil

1.

Hace muchos años un dinosaurio quedó atrapado en el lodo y murió. El dinosaurio quedó como un esqueleto.

2.

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Muchos años después, el esqueleto se convirtió en piedra.

3.

Pasaron millones y millones de años.
Algunos científicos estudiaron
buscando fósiles y encontraron huesos de
dinosaurios.

4.

Los científicos eran llamados
Paleontólogos. Sacaron con cuidado
los nuevos fósiles de las piedras y los
llevaron a un museo.

5.

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Después de limpiar los huesos,
pusieron otra vez los nuevos juntos.
Se maravillaron de ver que estaban
ante el esqueleto de un
dinosaurio.